

11.6 Calculation of Hg Concentration.

Calculate the Hg concentration for each sorbent trap, using the following equation:

$$C = \frac{M^*}{V_t} \quad (\text{Eq. K-6})$$

Where:

C = Concentration of Hg for the collection period, (µg/dscm)

M* = Normalized total mass of Hg recovered from sections 1 and 2 of the sorbent trap, (µg)

V_t = Total volume of dry gas metered during the collection period, (dscm). For the purposes of this appendix, standard temperature and pressure are defined as 20 °C and 760 mm Hg, respectively.

11.7 Calculation of Paired Trap Agreement.

Calculate the relative deviation (RD) between the Hg concentrations measured with the paired sorbent traps:

$$RD = \frac{|C_a - C_b|}{C_a + C_b} \times 100 \quad (\text{Eq. K-7})$$

Where:

RD = Relative deviation between the Hg concentrations from traps “a” and “b” (percent)

C_a = Concentration of Hg for the collection period, for sorbent trap “a” (µg/dscm)

C_b = Concentration of Hg for the collection period, for sorbent trap “b” (µg/dscm)

11.8 Calculation of Hg Mass Emissions.

To calculate Hg mass emissions, follow the procedures in section 9.1.2 of appendix F to this part. Use the average of the two Hg concentrations from the paired traps in the calculations, except as provided in §75.15(h).

12.0 Method Performance.

These monitoring criteria and procedures have been applied to coal-fired utility boilers (including units with post-combustion emission controls), having vapor-phase Hg concentrations ranging from 0.03 µg/dscm to 100 µg/dscm.

[70 FR 28695, May 18, 2005]

PART 76—ACID RAIN NITROGEN OXIDES EMISSION REDUCTION PROGRAM

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APPENDIX A TO PART 76—PHASE I AFFECTED COAL-FIRED UTILITY UNITS WITH GROUP 1 OR CELL BURNER BOILERS

APPENDIX B TO PART 76—PROCEDURES AND METHODS FOR ESTIMATING COSTS OF NITROGEN OXIDES CONTROLS APPLIED TO GROUP 1, PHASE I BOILERS

AUTHORITY: 42 U.S.C. 7601 and 7651 *et seq.*

SOURCE: 60 FR 18761, Apr. 13, 1995, unless otherwise noted.

§ 76.1 Applicability.

(a) Except as provided in paragraphs (b) through (d) of this section, the provisions apply to each coal-fired utility unit that is subject to an Acid Rain emissions limitation or reduction requirement for SO₂ under Phase I or Phase II pursuant to sections 404, 405, or 409 of the Act.

(b) The emission limitations for NO_x under this part apply to each affected coal-fired utility unit subject to section 404(d) or 409(b) of the Act on the date the unit is required to meet the Acid Rain emissions reduction requirement for SO₂.

(c) The provisions of this part apply to each coal-fired substitution unit or compensating unit, designated and approved as a Phase I unit pursuant to §72.41 or §72.43 of this chapter as follows:

(1) A coal-fired substitution unit that is designated in a substitution plan that is approved and active as of January 1, 1995 shall be treated as a Phase I coal-fired utility unit for purposes of this part. In the event the designation of such unit as a substitution unit is terminated after December 31, 1995, pursuant to §72.41 of this chapter and the unit is no longer required to meet Phase I SO₂ emissions limitations, the

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provisions of this part (including those applicable in Phase I) will continue to apply.

(2) A coal-fired substitution unit that is designated in a substitution plan that is not approved or not active as of January 1, 1995, or a coal-fired compensating unit, shall be treated as a Phase II coal-fired utility unit for purposes of this part.

(d) The provisions of this part for Phase I units apply to each coal-fired transfer unit governed by a Phase I extension plan, approved pursuant to § 72.42 of this chapter, on January 1, 1997. Notwithstanding the preceding sentence, a coal-fired transfer unit shall be subject to the Acid Rain emissions limitations for nitrogen oxides beginning on January 1, 1996 if, for that year, a transfer unit is allocated fewer Phase I extension reserve allowances than the maximum amount that the designated representative could have requested in accordance with § 72.42(c)(5) of this chapter (as adjusted under § 72.42(d) of this chapter) unless the transfer unit is the last unit allocated Phase I extension reserve allowances under the plan.

§ 76.2 Definitions.

All terms used in this part shall have the meaning set forth in the Act, in § 72.2 of this chapter, and in this section as follows:

Alternative contemporaneous annual emission limitation means the maximum allowable NO_x emission rate (on a lb/mmBtu, annual average basis) assigned to an individual unit in a NO_x emissions averaging plan pursuant to § 76.10.

Alternative technology means a control technology for reducing NO_x emissions that is outside the scope of the definition of low NO_x burner technology. Alternative technology does not include overfire air as applied to wall-fired boilers or separated overfire air as applied to tangentially fired boilers.

Approved clean coal technology demonstration project means a project using funds appropriated under the Department of Energy's "Clean Coal Technology Demonstration Program," up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded

through appropriations for the Environmental Protection Agency. The Federal contribution for a qualifying project shall be at least 20 percent of the total cost of the demonstration project.

Arch-fired boiler means a dry bottom boiler with circular burners, or coal and air pipes, oriented downward and mounted on waterwalls that are at an angle significantly different from the horizontal axis and the vertical axis. This definition shall include only the following units: Holtwood unit 17, Hunlock unit 6, and Sunbury units 1A, 1B, 2A, and 2B. This definition shall exclude dry bottom turbo fired boilers.

Cell burner boiler means a wall-fired boiler that utilizes two or three circular burners combined into a single vertically oriented assembly that results in a compact, intense flame. Any low NO_x retrofit of a cell burner boiler that reuses the existing cell burner, close-coupled wall opening configuration would not change the designation of the unit as a cell burner boiler.

Coal-fired utility unit means a utility unit in which the combustion of coal (or any coal-derived fuel) on a Btu basis exceeds 50.0 percent of its annual heat input during the following calendar year: for Phase I units, in calendar year 1990; and, for Phase II units, in calendar year 1995 or, for a Phase II unit that did not combust any fuel that resulted in the generation of electricity in calendar year 1995, in any calendar year during the period 1990–1995. For the purposes of this part, this definition shall apply notwithstanding the definition in § 72.2 of this chapter.

Combustion controls means technology that minimizes NO_x formation by staging fuel and combustion air flows in a boiler. This definition shall include low NO_x burners, overfire air, or low NO_x burners with overfire air.

Cyclone boiler means a boiler with one or more water-cooled horizontal cylindrical chambers in which coal combustion takes place. The horizontal cylindrical chamber(s) is (are) attached to the bottom of the furnace. One or more cylindrical chambers are arranged either on one furnace wall or on two opposed furnace walls. Gaseous combustion products exiting from the chamber(s) turn 90 degrees to go up through